

REMARKS

The Applicants thank the Examiner for the careful consideration of this application. Claims 4-10 and 14-26 are currently pending. Claims 4-10 and 14-20 have been amended. Claims 1-3 and 11-13 have been cancelled, without prejudice. New claims 21-26 have been added. The Office Action indicated that claims 7-10 and 17-12 are directed to allowable subject matter. Based on the foregoing amendments and the following remarks, the Applicants respectfully request that the Examiner reconsider all outstanding rejections and that they be withdrawn.

Claim Rejections under 35 U.S.C. § 112

The Office Action rejected claims 1-20 under 35 U.S.C. § 112, second paragraph, as being indefinite. In order to place the claims in conformance with U.S. practice, claims 1-3 have been cancelled and replaced with new claims 21-23; claims 11-13 have been cancelled and replaced with new claims 24-26; and claims 4-10, and 14-20 have been amended. As a result, the Applicants respectfully request that the rejections under 35 U.S.C. § 112 be withdrawn.

Claim Rejections under 35 U.S.C. § 103

(I) The Office Action rejected claims 1-3, and 11-13 under 35 U.S.C. § 103(a) as being unpatentable over JP 62-195146 (the “JP reference”) in view of U.S. Patent No. 5,091,288 to Zappella et al. (“Zappella”). Independent claims 1 and 11 have been cancelled, without prejudice, and replaced with new independent claims 21 and 24, respectively. The Applicants

traverse this rejection for at least two reasons.

First, no combination of the JP reference and Zappella discloses or suggests “applying a film of negative photoresist onto the upper face [of a die],” as recited by independent claims 21 and 24. The JP reference does not appear to disclose that the photoresist film 9 is a *negative* photoresist. (See the JP reference at Abstract.) Zappella also fails to disclose a *negative* photoresist. Rather, Zappella expressly discloses a *positive* photoresist. (See, e.g., Zappella at 3:6-8, 22-25, 28-31). Further, and equally important, no combination of the JP reference and Zappella, or any other reference of record, discloses or suggests applying the negative photoresist onto the upper face of the die **such that the negative photoresist covers the at least one etched recess without filling the such recess**, as recited by claims 21 and 24. This recitation is supported in the specification, for example at page 7, lines 1-4. The abstract and drawings of the Japanese reference teach that the photoresist film 9 is provided to fill and be retained in the groove 8, and not to cover the groove without filling the groove as claimed. As disclosed in the present application, the negative photoresist film 30 is intended to protect the etching 12 without leaving any residual in it. In other words, the etching remains clean and has no contact with the photoresist, which is completely contrary to the teachings the Japanese reference applied in this rejection or any other prior art of record.

Second, no combination of the JP reference and Zappella discloses or suggests “exposing the film of negative photoresist to ultraviolet radiation through a first mask . . . thereby polymerizing a region of the film of negative photoresist covering the at least one etched recess,” as recited by independent claims 21 and 24. The Office Action apparently acknowledges on page 3 that the JP reference fails to disclose exposing the photoresist layers to ultraviolet radiation through a mask. Zappella also fails to disclose “exposing the film of negative photoresist to ultraviolet radiation through a first mask . . . thereby polymerizing a region of the film of

negative photoresist.” Because Zappella discloses a positive photoresist, and not a negative one, any exposure of Zappella’s photoresist to ultraviolet radiation would *depolymerize* the exposed region, not *polymerize* it, as claimed.

Independent claims 21 and 24 are patentable over any reasonable combination of the JP reference and Zappella for at least the reasons demonstrated above. The remaining claims in this application depend variously from claims 21 and 24, and are patentable for at least the same reasons.

(II) The Office Action rejected claims 4-6 and 14-16 under 35 U.S.C. § 103(a) as being unpatentable over the JP reference in view of Zappella, and further in view of U.S. Patent No. 5,888,845 to Bashir et al. (“Bashir”). Claims 4-6 and 14-16 depend from independent claims 21 and 24, respectively. As demonstrated above, claims 21 and 24 are both patentable over any reasonable combination of the JP reference and Zappella. Bashir does not remedy the deficiencies of these two references. Therefore, independent claims 21 and 24, as well as dependent claims 4-6 and 14-16, are patentable over any reasonable combination of the JP reference, Zappella, and Bashir.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants, therefore, respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal

Applicant: Renato Conta et al.
Application No.: 10/527,670

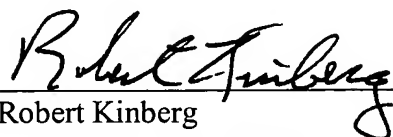
communication will expedite prosecution of this application, the Examiner is hereby invited to telephone the undersigned at the number provided.

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Prompt and favorable consideration of this Amendment is respectfully requested.

Respectfully submitted,

Date: 1/18/07


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